REMARKS:

Applicant has carefully studied the nonfinal Examiner's Action and all references cited therein. The amendment appearing above and these explanatory remarks are believed to be fully responsive to the Action. Accordingly, this important patent application is now believed to be in condition for allowance.

Applicant responds to the outstanding Action by centered headings that correspond to the centered headings employed by the Office, to ensure full response on the merits to each finding of the Office.

Claim Rejections – 35 U.S.C. § 103

Applicant acknowledges the quotation of 35 U.S.C § 103(a).

Claims 1-5, 9, 10, 12, 13 and 14 stand rejected under 35 U.S.C § 103(a) as being unpatentable over Giger et al. (U.S. 5,133,020) in view of Huo et al. (U.S. 6,282,305).

Regarding claim 1, the Office states that Giger et al. teaches identifying a standard threshold of the computer algorithm for identifying false positive abnormalities (column 6, lines 33-column 9, line 10); and adjusting the threshold for identifying false positives based on the risk associated with a patient (column 12, line 58-column 13, line 7). The Office goes on to state that while Giger et al. does not specifically teach calculating breast cancer risk, that Huo et al. discloses a method which includes establishing a risk probability with a patient with factors such as age (column 5, lines 55-63; column 6, lines 25-40); applying a computer algorithm to find abnormalities in a patient's mammogram (column 9, lines 30-48). The Office concludes that it would have been obvious for one of ordinary skill in the art at the time the invention was made to combine the references of Huo et al. with Giger et al. to gain the benefit of using known risk analysis methods to improve the prognosis or diagnosis of breast cancer based on mammograms. Giger et al. indicates that the threshold may be adjusted for the risk assessment of a patient for better evaluation of a mammogram (column 12, line 58-column 13, line 7). Based on their recommendation, one of ordinary skill in the art would be motivated to search for a method of

5

calculating breast cancer risk. Huo et al. provides methods of calculating breast cancer risk. One of ordinary skill in the art would be motivated to combine the references of Giger et al. and Huo et al. in order to carry out Giger et al.'s method as he indicates.

Applicant respectfully traverses the finding of the Office.

Claim 1 has been amended to clearly state the method steps which applicant regards as the invention. Accordingly, claim 1 of the present invention includes the method steps of establishing a risk probability value associated with an asymptomatic patient, the risk probability value calculated from an array of risk factors associated with breast cancer, selecting a computer algorithm to identify abnormalities in the asymptomatic patient's mammogram, identifying a standard threshold of the computer algorithm for identifying false positive abnormalities, adjusting the standard threshold of the computer algorithm for identifying false positive abnormalities in response to the risk probability value associated with the asymptomatic patient and applying the computer algorithm using the adjusted standard threshold to identify abnormalities in the asymptomatic patient's mammogram.

The present invention relates to screening asymptomatic mammograms. By contrast, Giger et al. relates to diagnostic mammograms. It is known in the art that a screening mammogram is an x-ray of the breast used to detect breast changes in women who have no sign or symptoms of breast cancer (i.e. asymptomatic). By contrast, a diagnostic mammogram is an x-ray of the breast that is used to check for breast cancer after a lump or other sign or symptom (i.e. symptomatic) of breast cancer has been found. The present invention is a method of screening mammograms from asymptomatic patients to identify abnormalities in mammograms of women who have no other signs or symptoms of breast cancer as such the method is described and claimed as being applicable to asymptomatic patients and mammograms associated with asymptomatic patients.

In summary, the work by Giger et al. analyzes abnormalities and describes a classification scheme. In this scheme the classification thresholds may be based on the patient's risk in deciding if the abnormality is benign or malignant. By contrast, in the present invention application, the primary detection of an asymptomatic mammogram is based on risk. The present invention does not attempt to classify a predetermined abnormality based on risk, but instead

6

applies risk based thresholds to find the abnormalities within an asymptomatic mammogram. The work by Giger et al. describes the secondary classification task once an abnormality, as such Giger et al. describes a secondary classification of symptomatic mammograms in contrast to the present invention which describes risk based primary detection of asymptomatic mammograms.

For the reasons cited above, Applicant believes that amended independent claims 1 and 14 are not obvious in view of Giger et al. in combination with Huo et al., and are therefore believed to be in condition for allowance.

Claims 2-13 are dependent upon claim 1, and are therefore allowable as a matter of law.

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned is requested.

Very respectfully,

SMITH & HOPEN

By:_____

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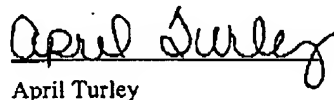   Agent for Applicant

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CERTIFICATE OF FACSIMILE TRANSMISSION

(37 C.F.R. 1.8 (a))

I HEREBY CERTIFY that this Amendment AF is being transmitted by facsimile to the United States Patent and Trademark Office, Art Unit 1631, Attn.: Jerry Lin on May 29, 2007.

Dated: May 29, 2007

April Turley

7